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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>			
				Application Number		Not Yet Assigned	
				Filing Date		December 24, 2003	
				First Named Inventor		Marcos C. Tzannes	
				Art Unit		Not Yet Assigned	
				Examiner Name		Not Yet Assigned	
Sheet	1	of	1	Attorney Docket Number		T3653-8881US02	

U.S. PATENT DOCUMENTS					
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		US-3,655,920	04-11-1972	Lanne	
		US-4,057,691	11-08-1977	Goto et al.	
		US-5,530,724	06-25-1996	Abrams et al.	
		US-5,548,222	08-20-1996	Jensen et al.	
		US-			
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FOREIGN PATENT DOCUMENTS						
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>4</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Form PCT/IPEA/409	

Examiner Signature		Date Considered	10/07/04
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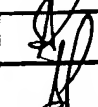
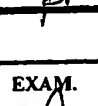


















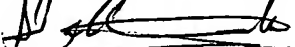
<sup>1</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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FORM PTO - 1449				ATTORNEY DOCKET NO.: AWR-021 (457/23)			
INFORMATION DISCLOSURE STATEMENT				APPLICANTS: Tzannes			
				SERIAL NO.:			
				FILING DATE: December 24, 2003.			
U.S. PATENT DOCUMENTS							
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	3,573,380	4/6/71	Darlington	179	15	5/15/69
	A2	4,131,766	12/26/78	Narasimha	179	15	7/11/77
	A3	4,568,156	2/4/86	Dane	350	632	11/7/84
	A4	4,679,227	7/7/87	Hughes-Hartogs	379	98	5/20/85
	A5	4,731,816	3/15/88	Hughes-Hartogs	379	98	1/12/87
	A6	4,802,190	1/31/89	Immink	375	38	6/15/87
	A7	4,912,763	3/27/90	Galand et al.	381	31	9/24/87
	A8	5,048,054	9/10/91	Eyuboglu et al.	375	8	5/12/89
	A9	5,128,964	7/7/92	Mallory	375	39	10/10/90
	A10	5,206,886	4/27/93	Bingham	375	97	4/16/90
	A11	5,285,474	2/8/94	Chow et al.	375	13	6/12/92
	A12	5,327,574	7/5/94	Monma et al.	455	33.2	2/20/91
	A13	5,400,322	3/21/95	Hunt et al.	370	19	8/20/93
	A14	5,428,790	6/27/95	Harper et al.	395	750	10/8/93
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	A20	5,555,244	9/10/96	Gupta et al.	370	60.1	6/30/94
	A21	5,596,604	1/21/97	Cioffi et al.	345	260	8/17/93
	A22	5,598,435	1/28/97	Williams	375	261	2/4/94
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	A25	5,822,372	10/13/98	Emami	375	260	8/2/96		
	A26	6,052,411	4/18/00	Mueller et al.	375	222	4/6/98		
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	B1	19624928 A1	1/8/98	DE	H04B	3/32	6/21/96	N	N
	B2	9806186 (0916193)	2/12/98	WO (EP)	H04B	3/32	1/15/97	N	Y
	B3	0652677 A3	3/27/96	EP	H04N	7/24	11/4/94	N	Y
	B4	0652677 A2	5/10/95	EP	H04N	7/24	11/4/94	N	Y
	B5	0473465 A1	3/4/92	EP	H04M	1/72	5/30/91	N	Y
	B6	0703685 A2	3/27/96	EP	H04L	1/18	9/14/95	N	Y
	B7	0762701 A2	3/12/97	EP	H04L	27/26	9/4/96	N	Y
	B8	0812087 A2	12/10/97	EP	H04L	27/26	5/28/97	N	Y
	B9	0820168 A2	1/21/98	EP	H04L	5/14	7/17/97	N	Y
	B10	0840474 A2	5/6/98	EP	H04L	5/14	10/28/97	N	Y
	B11	0905948 A2	3/31/99	EP	H04L	27/26	9/21/98	N	Y
	B12	97/15131	4/24/97	WO	H04L	1/12	10/18/96	N	Y
	B13	98/27665	6/25/98	WO	H04B	1/38	12/4/97	N	Y
	B14	98/57472	12/17/98	WO	H04L	27/26	6/9/98	N	Y
	B15	99/16224	4/1/99	WO	H04L	27/26	9/9/98	N	Y
	B16	99/18701	4/15/99	WO	H04L	27/00	6/18/98	N	Y
	B17	98/06186	2/12/98	WO	H04B	3/32	1/15/97	N	Y
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
	C1	John A. C. Bingham, "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come" May 1990 - IEEE Communications Magazine Pages 5-14.							
EXAMINER 					DATE CONSIDERED 